

# **DIGITAL HOUSTON INITIATIVE**

# **INFORMATION TECHNOLOGY DEPARTMENT (ITD)**

# **REQUEST FOR PROPOSAL**

DRAFT – FOR PUBLIC INPUT ONLY 17 February, 2006

# WIRELESS BROADBAND NETWORK FINANCING & MANAGEMENT SERVICES

## **FOR**

# THE CITY OF HOUSTON

## NOTICE OF REQUEST FOR PUBLIC INPUT

# 2/17/06 DRAFT REQUEST FOR PROPOSAL (RFP) FOR

# WIRELESS BROADBAND NETWORK FINANCING & MANAGEMENT SERVICES

The City of Houston (City) intends to issue a Request for Proposal (RFP) to solicit interest from prospective companies (Proposers) for the financing and management of a wireless broadband network (Network) throughout the City. Prior to the issuance of the FINAL RFP, the City will post two DRAFT RFPs on 17 February, 2006 (this DRAFT) and 3 March, 2006 to allow interested parties to comment or suggest improvements to the FINAL RFP.

During this comment period, the City may incorporate suggested revisions that have been determined to add value to the FINAL RFP. A written response will not be provided to each respondent; however communications may be initiated by the City to clarify a comment submission.

Comments to this DRAFT RFP should be submitted using the form at http://www.houstontx.gov/it/wirelessrfp.html.

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# 2/17/06 DRAFT REQUEST FOR PROPOSAL (RFP)

# WIRELESS BROADBAND NETWORK FINANCING & MANAGEMENT SERVICES

The City of Houston (City) Information Technology Department (ITD) invites prospective companies (Proposers) to submit a written proposal for the financing and management of a wireless broadband network (Network) throughout the City. Proposals are solicited in accordance with the terms, conditions and instructions as set forth in this Request for Proposal (RFP).

All materials related to the FINAL RFP will be available on the Internet at http://www.houstontx.gov/it/wirelessrfp.html

In the event you do not have download capability, all materials may be obtained from the Houston Information Technology Department, Infrastructure Division, 8<sup>th</sup> Floor, 611 Walker, Houston, Texas 77002.

Proposers must submit any questions concerning the FINAL RFP no later than <u>Tuesday, April 11, 2006 at 5:00 P.M. local time</u> to <<ADDRESS TO BE PROVIDED WITH FINAL RFP>>. All questions submitted will be correlated and made available on the Internet at <<ADDRESS TO BE PROVIDED WITH FINAL RFP>>

There will be a Pre-Proposal Conference on <u>Tuesday, April 18, 2006 at 2:00 P.M. local time</u> in the Garden Level Auditorium, 611 Walker, Bob Lanier, Public Works Building.

The City will receive proposals at the City Secretary's Office, City Hall Annex, Public Level, 900 Bagby, Houston, Texas 77002 until <u>Tuesday, May 9, 2006 at 2:00 P.M. local time</u>. No proposals will be accepted after the stated deadline.

All proposals will be required to comply with City Council Ordinance No. 78-1538, passed August 9, 1978, relating to Equal Employment Opportunity Contract Compliance. The City reserves the right to reject any or all proposals or to accept any proposal or portion of a proposal deemed to be in the City's best interest.

#### 1. GENERAL INSTRUCTIONS

#### 1.1 Submittal Procedure

Proposers must submit ten (10) copies of their proposal, including one (1) printed original, signed in ink, in a sealed envelope. Proposers may elect to either personally delivery, or mail, their proposals to:

Personal Delivery City Secretary's Office Mail Delivery: Office of the City Secretary

City Hall Annex P.O. Box 1562

900 Bagby Houston, Texas 77251

Houston, Texas 77002

The deadline for the submittal of proposals is no later than <u>Tuesday</u>, <u>May 9</u>, <u>2006 at 2:00 P.M. <u>local time</u>. Proposers may submit their proposals at any time prior to the above stated deadline. Failure to submit the require number of copies by this deadline may be subject for disqualification from the RFP process.</u>

The City shall bear no responsibility for submitting proposals on behalf of any Proposer.

## 1.2 Proposal Format

All proposals should be electronically generated and the printed original signed in ink. Proposals should not be submitted in elaborate or expensive binders. Legibility, clarity and completeness are important and essential. One (1) electronic disk containing an Adobe Portable Document Format (PDF) version of all proposal materials should also be provided.

The proposal must be signed by individual(s) legally authorized to bind the Proposer(s) and must contain a statement that the proposal and the prices contained therein shall remain firm for a period of one hundred-eighty (180) days after receipt by the City.

#### 1.3 Pre-Proposal Conference

A Pre-Proposal Conference will be held <u>Tuesday, April 18, 2006 at 2:00 P.M. local time</u> in the Garden Level Auditorium, 611 Walker, Bob Lanier, Public Works Building. Interested Proposers should plan to attend. It will be assumed that Proposers attending this meeting have reviewed the RFP in detail and are prepared to bring up any substantive questions, which have not already been addressed by the City.

#### 1.4 Additional Information and Questions

Requests for additional information and questions should be addressed to the Information Technology Department, Infrastructure Division, <<ADDRESS TO BE PROVIDED WITH FINAL RFP>>, no later than <u>Tuesday, April 11, 2006 at 5:00 P.M. local time</u>. Questions received from all Proposers shall be answered and posted to the website at <<ADDRESS TO BE PROVIDED WITH FINAL RFP>>. Any changes to the RFP or the RFP process shall be posted to the website as addenda.

#### 1.5 Addenda & Modifications

All addenda, amendments, and interpretations to this solicitation shall be in writing. Any amendment or interpretation that is not in writing shall not legally bind the City. Only information supplied by the City in writing or in this RFP should be used in preparing proposal responses. All contacts that a Proposer may have had before or after receipt of this RFP with any individuals, employees, subcontractors, consultants or representatives of the City and any information that may have been read in any news media or seen or heard in any communication facility regarding this RFP should be disregarded in preparing responses.

The City does not assume responsibility for the receipt of any addendum sent to Proposers.

## 1.6 Examination of Documents and Requirements

Each Proposer shall carefully examine all RFP documents and thoroughly familiarize themselves with all Requirements prior to submitting a proposal to ensure that the proposal meets the intent of this RFP.

Before submitting a proposal, each Proposer shall be responsible for making all investigations and examinations that are necessary to ascertain conditions and requirements affecting the Requirements of this RFP. Failure to make such investigations and examinations shall not relieve the Proposer from obligation to comply, in every detail, with all provisions and Requirements of the RFP.

# 1.7 Post-Proposal Discussions with Proposers

It is the City's intent to commence final negotiation with the Proposer(s) deemed most advantageous to the City. The City reserves the right to conduct post-proposal discussions with any Proposer(s).

## 1.8 Terms, Conditions, Limitations and Exceptions

- 1. This RFP does not commit the City to award a contract, issue a Purchase Order, or to pay any costs incurred in the preparation of a proposal in response to this request.
- 2. The proposals will become part of the City's official files without any obligation on the City's part. All proposals shall be held confidential from all parties other than the City until after the contract is awarded. Afterward, the proposals shall be available to the public.

- 3. The City shall not be held accountable if material from proposals is obtained without the written consent of the Proposer by parties other than the City, at any time during the proposal evaluation process.
- 4. In the event a Proposer submits trade secret information to the City, the information must be clearly labeled as a "Trade Secret". The City will maintain the confidentiality of such trade secrets to the extent provided by law.
- 5. Proposer(s) shall not offer any gratuities, favors, or anything of monetary value to any official or employee of the City (including any and all members of proposal evaluation committees).
- 6. Proposer(s) shall not collude in any manner, or engage in any practices, with any other Proposer(s), which may restrict or eliminate competition or otherwise restrain trade. This is not intended to preclude subcontracts and joint ventures for the purposes of: a) responding to this RFP, or b) establishing a project team with the required experience and/or capability to provide the goods or services specified herein. Conversely, the City can combine or consolidate proposals, or portions thereof, for the purposes mentioned above.
- 7. All proposals submitted must be the original work product of the Proposer. The copying or paraphrasing of the work product of another Proposer is not permitted.
- 8. The RFP and the related responses of the selected Proposer may by reference become part of any formal agreement between the selected Proposer and the City. The City and the selected Proposer may negotiate a contract or contracts for submission to City Council for consideration and approval. In the event an agreement cannot be reached with the selected Proposer, the City reserves the right to select an alternative Proposer. The city reserves the right to negotiate with alternative Proposer(s) the exact terms and conditions of the contract.
- 9. Proposers, their authorized representatives, and their agents are responsible for obtaining, and will be deemed to have, full knowledge of the conditions, requirements, and specifications of the RFP at the time a proposal is submitted to the City.
- 10. If necessary for the completion of tasks required under the project, the City will provide reasonable working space to the Proposer.
- Clerical support and reproduction of documentation costs shall be the responsibility of the Proposer. If required, such support and costs shall be defined in the contract negotiated.
- 12. The City may terminate its performance under a contract in the event of a default by the Proposer and a failure to cure such default after receiving notice of default from the City. Default may result from the Proposer's failure to perform under the terms of the contract or from the Proposer becoming insolvent, having a substantial portion of its assets assessed for the benefit of creditors, or having a receiver or trustee appointed.
- 13. The City has sole discretion and reserves the right to cancel this RFP or to reject any or all proposals received prior to contract award.

- 14. The City reserves the right to waive any formalities canceling this RFP, or to reject any or all proposals or any part thereof.
- 15. The City reserves the right to request clarification of any proposal after all proposals have been received.
- 16. The City reserves the right to select elements from different individual proposals and to combine and consolidate them in any way that best serves the City's interest. The City reserves the right to reduce the scope of the project and evaluate only the remaining elements from all proposals. The City reserves the right to reject specific elements contained in all proposals and to complete the evaluation process based only on the remaining items.
- 17. Proposers must furnish a "Certificate of Vote" signed by their Chief Executive Officers or managing partners, which lists the specific officers who are authorized to execute agreements on behalf of the Proposer.
- 18. The selected Proposer must furnish a "Certificate of Registration" which authorizes them to conduct business in the State of Texas prior to the awarding of the contract. Such Registration is obtained from the Texas Secretary of State's Office, which will also provide the certification thereof.

## 1.9 MW/DBE Participation

Pursuant to City Council Motion No. 86-2204 passed August 5, 1986, each Proposer must agree that if awarded the contract, the Proposer will make good faith efforts to award subcontracts or purchase agreements of <u>at least 24%</u> of the service portion of the network cost, excluding hardware/software. This percentage establishes the value for MW/DBE participation goal. However, the goal can be achieved through subcontracts or purchase agreements for hardware, software or services where City certified MW/DBE capacity exists. MW/DBE firms must be certified by the City's Affirmative Action Division. Evidence of this good faith effort must be included in the proposal. Exhibit E, "MW/DBE Materials" is included for informational purposes only.

## 1.10 City Contractor Ownership Disclosure Ordinance

City Council requires knowledge of the identities of the owners of entities seeking to contract with the City in order to review their indebtedness to the City prior to entering contracts. Therefore, all Proposers to this RFP must comply with Houston Code of Ordinances Chapter 15, as amended (Sections 15-122 through 15-126) relating to the disclosure of owners of entities bidding on, proposing for or receiving City contracts.

Completion of Exhibit F – "Affidavit of Ownership or Control" will satisfy this requirement. Failure to provide this information may be just cause for rejection of your proposal.

## 1.11 City of Houston Fair Campaign Ordinance

The City of Houston Fair Campaign Ordinance makes it unlawful for a contractor to offer any contribution to a candidate for City elective office. For purposes of this ordinance a contract is defined as any contract for goods or services having a value in excess of \$30,000 or more,

regardless of the way by which it was solicited or awarded. Exhibit H of this RFP describes the contract and documentation requirements relating to this ordinance.

# 1.12 Project Administration

Overall project administration shall be provided by <<NAME TO BE PROVIDED WITH FINAL RFP>>. Questions regarding the scope of the project, Requirements, etc. may be addressed to the Project Manager at the pre-proposal conference.

#### 1.13 Schedule

Listed below are important dates and times by which actions related to this RFP should be completed.

EVENT	<u>DATE</u>
1 <sup>st</sup> Draft RFP Posted for Comment 2 <sup>nd</sup> Draft RFP Posted for Comment	Friday, February 17, 2006 Friday, March 3, 2006
Date of Issue of the Final RFP Questions from Proposers Due to City Pre-Proposal Conference Proposals Due from Proposers	Friday, March 17, 2006 Tuesday, April 11, 2006 Tuesday, April 18, 2006 Tuesday, May 9, 2006
Multi-Phase Evaluation Process Contract Negotiation with Highest Rated Proposers Council Action on Contract	June-July, 2006 July-August, 2006 September, 2006
Begin Implementation	September, 2006

## 2. PROJECT OVERVIEW

# 2.1 Introduction and background

The City has been engaged in a project to design, build and manage a wireless broadband network for intelligent parking meters in the downtown area. This project is enhancing the deployment of new credit card parking meters - with lower operating cost than commercial wireless connectivity - and allowing the City to gain valuable experience in applying technology for community benefit.

In October 2005, the Honorable Mayor Bill White announced the City's intent to expand the downtown initiative to make wireless broadband Internet access available throughout the entire City. In addition to expanding the geographic coverage of the Network, the Mayor's plan envisions this new infrastructure providing three categories of service:

- <u>Public Service</u> This includes expanding the Network's use beyond parking meters to include work-order management for field personnel, automated traffic signaling and
  other municipal applications to better serve the public.
- <u>Public Access</u> This includes universally-available and affordably-priced Internet access for residents, businesses and visitors to the City, helping to promote economic development and digital inclusion.
- <u>Public Safety</u> This includes longer-term plans by the City to leverage the Network to improve the safety of the public – and the safety of Public Safety Officers - by providing field personnel with better access to information.

#### 2.2 Vision

The City's vision is to apply ubiquitous, low-cost wireless Internet access as a foundation for the City of Houston to become the most efficient, effective and responsive city government in the nation - while stimulating economic development and promoting digital inclusion for lowincome and disadvantaged residents.

Ubiquitous, low-cost wireless Internet access will:

- Reduce the City's communications expenses saving taxpayers money and allowing the City to deliver more efficient, effective and responsive services;
- Stimulate economic development, job growth and increased competitiveness for the City both nationally and internationally attracting new capital to the region (i.e. human, financial, physical and technological); and
- Promote digital inclusion throughout the City, particularly in low-income communities.

# 2.3 Policy Goals

The City's policy goals for this initiative are summarize below:

- <u>Universal Service</u> All government employees, residents, businesses and visitors to the City deserve to have high-speed broadband services available to them;
- Affordability Services shall be priced at a level that creates cost savings for the City and is affordable for all residents, businesses and visitors;
- <u>Use of City Assets</u> The City shall apply its rights-of-way and assets, as well as
  those for which the City may negotiate rights to with the local electric utility, in a way
  that maximizes the benefit for the City and the community;
- <u>Competition and Consumer Choice</u> Strong competition for broadband services is good for the City's economy. City agencies, residents, businesses and visitors shall have a choice of providers for these services;
- <u>Network Neutrality</u> The winning Proposer who finances and manages the Network shall not discriminate against any content, application or services provider, except in order to prevent abuse of the Network.
- <u>Private Sector Cooperation</u> The City's role shall be that of a catalyst to improve and enhance the market for broadband services in Houston. The City seeks to fulfill this role by collaborating with the private sector in a mutually-beneficial partnership.

# 2.4 Use of City Assets

The City intends to leverage its significant real estate holdings, as well as rights it may secure to assets owned by the local electric utility, to stimulate private investments and provide maximum value for the community.

The City's assets include:

- Approximately four hundred (400) city-owned buildings
- Eighteen (18) communications towers
- Twenty (20) miles of dark fiber
- More than 2,000 traffic signals

The City also intends to secure access to more than one (1) million street light and utility poles, which are owned by the local electric utility, and deployed in the City's rights-of-way.

Details of the assets referenced above will be provided to prospective Proposers upon request following the release of the FINAL RFP. These details will be provided as addenda to the RFP.

## 3. PROPOSAL OUTLINE AND CONTENT

Proposers responding to this RFP must submit the following information, in the order specified below:

# 3.1 Introduction and Executive Summary

Submit a letter of introduction and executive summary of the proposal. The letter must be signed by a person authorized by your firm to obligate your firm to make the commitments contained in the proposal. Submission of the letter will constitute a representation by your firm that your firm is willing and able to perform the commitments contained in the proposal.

## 3.2 Firm Description

Provide information on your firm's background and qualifications which addresses the following:

- Name, mailing address, e-mail address, telephone number and fax number of the primary contact person for your firm;
- A brief description of your firm, number of years in business, number of employees, office locations, etc. as well as any Joint Venture Partners;
- Financial details that demonstrate your firm's financial capacity to undertake and complete the project as proposed, which shall include;
  - A current audited statement of financial condition and financial statements for the two (2) prior years prepared by an independent certified public accountant;
  - A statement disclosing any state or federal bankruptcy or insolvency proceeding that Proposer has filed or with which Proposer is otherwise involved:
  - Electronic copies or Internet links to the most recent Form 10-K filed by the Proposer with the U.S. Securities and Exchange Commission; and
  - Electronic copies or Internet links to all Form 8-Ks filed since the filing of the most recent 10-K.
- If the proposal is submitted with Joint Venture Partners, provide full information concerning the nature and structure of the Joint Venture, including;
  - Entity (ies) that will be guaranteeing contract performance;
  - Date of Joint Venture formation; and

- A statement as to whether the agreement between Joint Venture Partners makes each partner jointly and severally liable for contractual obligations of this project.
- References for not more than three projects similar in size and scope performed by your firm including client, reference and telephone numbers, staff members who worked on each project, budget, schedule and project summary. Descriptions should be limited to one page for each project. If Joint Venture Partners are proposed, provide references for each; and
- Any other information not specifically itemized above that is believed to be demonstrative of your firm's financial capacity.

# 3.3 Solution Description

Provide information on your firm's proposed solution to address the following:

- A detailed description of the solution that is being proposed to meet the Detailed Requirements in Exhibit B. Proposers shall enumerate their responses according to the outline in Exhibit B; and
- Completion of the Requirements Compliance Template in Exhibit C.

# 3.4 Economic/Financial Projections

The City requires that each Proposer provide - using the template in Exhibit D - economic/financial projections for the costs, benefits and return on investment for the financing and management of the Network. The projections should be based on assumptions each Proposer makes regarding:

- The estimated capital cost to design and build the network;
- The estimated operating and maintenance expenses for a ten-year period;
- All other cost related to the Detailed Requirements in Exhibit B;
- The amount and types of compensation paid in exchange for the use of City assets;
- The number of commercial subscribers for all services for a ten-year period;
- The proposed wholesale rates to be charged to Service Providers;
- The proposed fees to be charged to the City for Public Services and Public Safety usage of the Network; and
- The estimated rates for retail services (if the Proposer intends to offer retail services).

Estimated costs for Internet connectivity at the POP should be itemized separately as noted in Exhibit D. The company proposed to provide this Internet connectivity should also be stated.

The City intends to retain the rights to the Capture Portal, but may consider a separate competitive process for these rights. Proposers should estimate the revenue they anticipate over the ten-year period - should they be granted these rights - for any content, advertising or other use of the Capture Portal using the template in Exhibit D.

# 3.5 Deployment Plan

The City desires an expedited deployment strategy and plan in order to realize the benefits of the initiative. Proposers should provide a strategic outline for deployment with a high level plan for deployment over a proposed period of time.

## 4. EVALUATION CRITERIA

The process for selecting a winning Proposer for the financing and management of the Network will be an open, competitive and fair process that is in compliance with Texas statutes.

Firms with extensive experience in partnering with local governments to finance and manage wireless broadband infrastructure - consistent with the vision, objectives, policy goals and requirements defined in this RFP - are encouraged to respond.

Following an evaluation of written proposals, the Proposer(s) receiving the highest scores may be invited to participate in a second round of competition. This may be followed by a second scoring, and the highest rated Proposer(s) may be invited into contract negotiations.

# 4.1 Value to the Community

This will be determined by the wholesale rates proposed in Exhibit D and the level of commitment to community technology programs as defined in Exhibit B.

# 4.2 Value to the City

This will be determined by the proposed amount and type of compensation for the use of City assets in terms of the proposed City's Public Service and Public Safety usage of the Network.

# 4.3 Financial Capacity

This will be determined by the financial capacity of the Proposer relative to other Proposers.

## 4.3 Experience

This will be determined by the quality of references provided that demonstrate the Proposers' experience in partnering with local governments to finance and manage network infrastructure to achieve similar vision, objectives, policy goals and requirements as those defined in this RFP.

## 4.4 Deployment Strategy and Plan

This will be determined by the timeliness and reasonableness of the Proposers' deployment strategy and plan.

#### **EXHIBIT A – DEFINITION OF TERMS**

<u>Capture Portal</u> shall refer to the web page that unauthenticated users will be redirected to when their computing device first attaches to the Network.

City shall refer to the City of Houston, TX.

<u>Core ISP Services</u> shall refer to value added features which are bundled with Internet access by Service Providers such as email accounts, newsgroup access and virus and/or spam protection.

**CPE** shall refer to Customer Premise Equipment.

**CTC** shall refer to Community Technology Center

<u>Fixed Broadband</u> shall refer to a service that provides Internet access for a stationary subscriber at a single location (the location where service is provisioned).

**HFD** shall refer to the Houston Fire Department.

**HPD** shall refer to the Houston Police Department.

<u>Interior Room</u> shall refer to a room within a building that does NOT have at least one wall directly facing a public street.

<u>Joint Venture Partner</u> shall refer to any organization proposing to provide products or services in response to this RFP through a partnership with the Proposer.

**Mbps** shall refer to Megabits per second.

**MPH** shall refer to Miles Per Hour.

**MTBF** shall refer to Mean Time Between Failures.

**M/WBE** shall refer to Minority/Women Businesses Enterprises

**<u>Network</u>** shall refer to a wireless broadband Internet access system that is deployed throughout the City.

<u>Network Operator</u> shall refer to the winning Proposer to this RFP who is responsible for the financing and management of the Network.

**NOC** shall refer to Network Operations Center.

**Nomadic Broadband** shall refer to a service that provides Internet access for a stationary subscriber at a variety of locations throughout the City.

<u>Open Access</u> shall refer to the winning Proposer's commitment to provide access to its wireless broadband Internet access transport services to multiple unaffiliated Service Providers.

<u>Perimeter Room</u> shall refer to a room within a building that has at least one wall facing a public street.

**PMSA** shall refer to Primary Metropolitan Statistical Area.

**POP** shall refer to an Internet Point of Presence.

<u>Portable Broadband</u> shall refer to a service that provides Internet access for an in-motion subscriber at a variety of locations throughout the City.

**Proposer** shall refer to a prime bidder to this RFP.

RFP shall refer to Request for Proposal.

**Requirements** shall refer to items defined in Exhibit B of the RFP.

<u>Service Provider</u> shall refer to any organization, whether affiliated with the winning Proposer or not, who markets, sells and supports services over the Network.

<u>Tier 1 Support</u> shall refer to the process of responding to, diagnosing and attempting to resolve issues reported by users of the Network.

<u>Tier 2 Support</u> shall refer to the process of responding to issues escalated by Tier 1 Support representatives who are unable to resolve issues reported by users of the Network.

<u>Tier 3 Support</u> shall refer to the process of responding to issues escalated by Tier 2 Support representatives who are unable to resolve issues escalated from Tier 1 Support representatives.

**VPN** shall refer to Virtual Private Network.

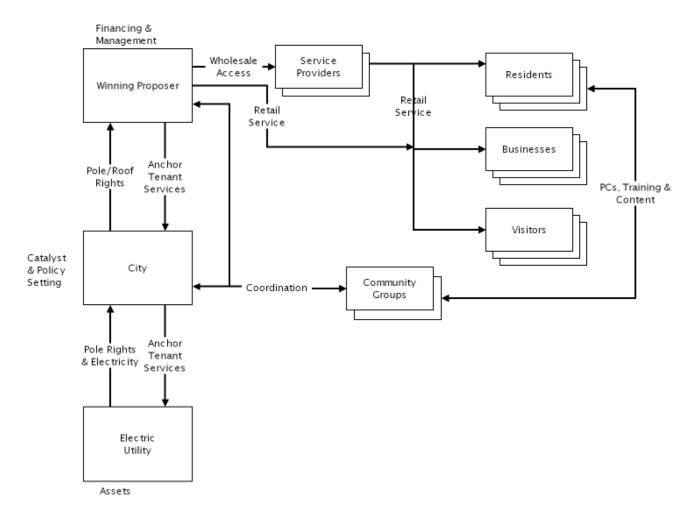
**VLAN** shall refer to Virtual Local Area Network.

<u>Wi-Fi (Wireless Fidelity)</u> shall refer to wireless technologies adhering to the IEEE 802.11b and 802.11g technical standards.

<u>WiMAX (Wireless Interoperability for Microwave Access)</u> shall refer to wireless technologies adhering to the IEEE 802.16 technical standards.

## **EXHIBIT B - DETAILED REQUIREMENTS**

# **B.1** Business Model



- The winning Proposer will finance, design, deploy and manage a citywide wireless broadband network.
- The City and other entities will grant rights to street and/or utility-poles, rooftops, electricity and other assets on a competitively-neutral and non-discriminatory basis to the winning Proposer.
- The winning Proposer will make access to the network available on a wholesale basis to multiple and competing retail Service Providers, who will market the service to residents, businesses and visitors. These Service Providers will also be responsible for subscriber billing, customer care and other required functions. The City will regulate wholesale rates through its contract with the winning Proposer in order to stimulate competition for lower-priced retail services.
- The winning Proposer may also market retail services over the network.

- The City will retain the right to the Capture Portal, in terms of both revenue related to commercial content and advertising on this page, as well as management of the pages' design, branding, layout, development and maintenance.
- The City will retain the right to review and suggest alternative providers and solutions for the Internet connectivity required at the POP.
- The City and the winning Proposer will collaborate with social service, nonprofit and other community groups to affect low-cost computer purchase, training and content for low-income and disadvantaged residents.
- The city may desire to extend its rights under any resulting contract to other political subdivisions and state agencies within the Houston PMSA - with the same or similar terms and conditions. This may result in the winning Proposer having the right, but not the obligation, to perform the financing and management of similar networks in other communities throughout the region.

# **B.2** Coverage

- a. Wireless Internet access shall be provided throughout the entire City. Solutions that provide access in only parts of the City that are more densely populated or commercially attractive, or that leave entire neighborhoods underserved, will not be considered.
- b. Outdoor coverage shall be provided for a minimum of 95% of all areas of the City. An area is considered covered under this requirement if a laptop, handheld or other personal computing device equipped with a minimum of an 802.11b/g (Wi-Fi) interface can access the network at the provisioned service level with no additional hardware required beyond the device's standard wireless interface.
- c. Indoor, Perimeter Room coverage shall be provided for a minimum of 90% of all residential and commercial buildings throughout the City. A building is assumed covered under this Requirement if a device located in each Perimeter Room on the ground and second floor of the building can access the Network at the provisioned service level. This coverage requirement may be met by using a Wi-Fi interface built into a user's device, a signal amplifier, a high-gain antenna and/or a dedicated Wi-Fi bridge or other type of CPE.
- d. Indoor, Perimeter Room coverage shall be provided for a minimum of 90% of all residential and commercial buildings throughout the City. A building is assumed covered under this Requirement if all Perimeter Rooms on all floors of the building can access the Network at the provisioned service level. Proposers shall address the following as it relates to this Requirement:
  - Does your solution propose to meet this Perimeter-Room coverage Requirement using Wi-Fi or another wireless technology?
  - If so, will your solution meet this Perimeter-Room access Requirement using an indoor or outdoor mounted antenna?

- If not, what commitment is your organization willing to make to outreach to and cooperate with - building owners, landlords, the City or other parties to meet this Requirement using in-building distribution networks?
- e. Indoor, Interior Room coverage shall be provided for a minimum of 90% of all residential and commercial buildings throughout the City. A building is assumed covered under this Requirement if all rooms on all floors of the building can access the Network at the provisioned service level. Proposers shall address the following as it relates to their proposed solution:
  - Does your solution propose to meet this Interior Room coverage Requirement using Wi-Fi or another wireless technology?
  - If so, will your solution meet this Interior Room coverage Requirement using an indoor or outdoor mounted antenna?
  - If not, what commitment is your organization willing to make to outreach to and cooperate with - building owners, landlords, the City or other parties to meet this Requirement using in-building distribution networks?

#### B.3 Multi-Use

- a. The Network shall support concurrent usage by City agencies (Public Service and Public Safety), residents, businesses, institutions and visitors to the City. Examples of usage scenarios and demand may include:
  - Residents and visitors may use the Network for such uses as E-mail, web browsing, instant messaging, and entertainment and voice services. To assist Proposers in forecasting demand for residential usage, and planning for the required capacity, summary residential demographics and links to additional resources are provided below. More detailed residential demographic information will be included with the FINAL RFP.
    - The City of Houston is 639.82 square miles with more than two million people.
    - General information about the city is published in the city's Almanac<sup>1</sup>. The Almanac contains information about Houston's people, culture, history, recreation and education. Along with census information, the Almanac covers topics from basic socioeconomic and housing issues to the climate in the city.
    - The Planning and Development Department uses information from the U.S. Census Bureau along with other agencies to develop demographic data<sup>2</sup> and estimates for the City as well as City Council Districts and City

<sup>&</sup>lt;sup>1</sup> The City's Almanac can be accessed at <a href="http://www.houstontx.gov/planning/Publications/Almanac2003\_final.pdf">http://www.houstontx.gov/planning/Publications/Almanac2003\_final.pdf</a>.

<sup>&</sup>lt;sup>2</sup> The City's Planning and Development Department published much of this information in the April, 2005 report "How We Compare", which can be accessed at http://www.houstontx.gov/planning/ComPlanning/How\_fulldoc.pdf.

Super Neighborhoods. This Demographic data includes, but is not limited to: population, housing, household, income, and other social characteristics.

- Population projections from 2000 2060 are available at http://www.houstontx.gov/planning/Demographics/demographics/PopProje ctions.htm.
- City Council District Maps can be accessed at http://www.houstontx.gov/council/maps/index.html.
- Businesses may use the Network for such uses as remote office connectivity, supply chain integration, customer relationship management and inventory control. To assist Proposers in forecasting demand for business usage, and planning for the required capacity, summary business demographics and links to additional resources are provided below. More detailed business demographic information will be included with the FINAL RFP.
  - The Harris County Appraisal District (HCAD) manages the reporting of business personal property assets (inventory, machinery and equipment, furniture and fixtures, computers, vehicles, vessels, aircraft, etc.) HCAD's 2005 data estimates that there are approximately 95,000 businesses in Harris County, with approximately 80,000 of those in the City of Houston.

Jurisdiction		
No.	Jurisdiction Name	Accounts
51	BAYTOWN, CITY OF	1,884
52	BELLAIRE, CITY OF	989
53	BUNKER HILL VILLAGE	46
54	DEER PARK, CITY OF	754
55	HEDWIG VILLAGE	580
56	EL LAGO, CITY OF	55
57	GALENA PARK, CITY OF	188
60	HILSHIRE VILLAGE, CITY OF	35
61	HOUSTON, CITY OF	80,090
62	HUMBLE, CITY OF	1,32
65	HUNTERS CREEK VILLAGE	49
66	JACINTO CITY, CITY OF	29
70	JERSEY VILLAGE, CITY OF	262
71	LA PORTE, CITY OF	82
72	MORGANS POINT, CITY OF	8:
73	NASSAU BAY, CITY OF	39
74	PASADENA, CITY OF	3,67
75	PINEY POINT VILLAGE, CITY OF	3
76	SEABROOK, CITY OF	348
77	SHOREACRES, CITY OF	10
78	SOUTH HOUSTON, CITY OF	73
79	SOUTHSIDE PLACE, CITY OF	9.
80	SPRING VALLEY, CITY OF	18
82	TAYLOR LAKE VILLAGE, CITY OF	3
83	TOMBALL, CITY OF	923
84	WEBSTER, CITY OF	884
85	W UNIVERSITY PLACE, CITY OF	250
	TOTAL	95,023

 Additional data on the number of business establishments by industry type can be found at <a href="http://www.city-data.com/business/econ-Houston-Texas.html">http://www.city-data.com/business/econ-Houston-Texas.html</a>.

- The Greater Houston Partnership (GHP) Technology Infrastructure Task Force (TITF), a group of senior executives from the Houston region's myriad educational, business, medical and social/nonprofit enterprises, assembled over the first nine months of 2005 to envision Houston's future technology infrastructure needs and develop a blueprint to turn technology dreams into technological reality. TIFT shares the City's vision for a Digital Houston and has been actively engaged in this RFP process. Proposers are encouraged to review TIFT's white paper Imagine.Houston at <a href="http://www.houston.org/pdfs/ImagineHouston.pdf">http://www.houston.org/pdfs/ImagineHouston.pdf</a>.
- Institutions such as universities and nonprofits may use the network for such uses as increased interaction between their institution and students/constituents. To assist Proposers in forecasting demand for institutional usage, and planning for the required capacity, summary institutional demographics and links to additional resources are provided below. More detailed institutional demographic information will be included with the FINAL RFP.

#### <<TO BE PROVIDED WITH FINAL RFP>>

 The City's Public Service agencies may use the Network for uses such as those indicated in the following table. To assist Proposers in forecasting demand for Public Service usage, and planning for the required capacity, the number of potential Public Service users is also provided for each application below.

Public Service Applications Roadmap	No. of users < 6 Months	No. of users < 18 Months	No. of users < 36 Months	Comments
Access to Workorder System (water/sewer) UCS	30		186	Access the Water/Wastewater Billing System
Access to Workorder System (water/sewer) WP	150			Access to Datastream 7i for Maintenance and Operations Personnel
Access to Workorder System (water/sewer) UMB		300		Access to IMS and Datastream 7i for Maintenance and Operations Personnel
Access to Workorder System (water/sewer) WW			200	Access to Datastream 7i for Maintenance and Operations Personnel
Access to ETS/Pocket Inspector/SCADA (sewer)	100			Access to ETS/SCADA/Pocket Inspector for Collection Rehab Contracts
Access to Workorder System CIPMS	55	95	100	PDA & Laptops Realtime Data Transfer to CIPMS
Field Inspections CIPMS	55	95	100	PDA & Laptops Realtime Data Transfer to CIPMS
Meter Reading/Telemetry UCS	5	20	200	AMR System
Meter Reading/Telemetry WP		200		Wireless Water Pressure Transmitters and Water Quality Analyzers
Building Inspection Wireless Field Data Entry	150			Wireless Inspection Results from Field Inspections sent to Mainframe Computer

 The City's Public Safety agencies may use the Network for uses such as those indicated in the following table. To assist Proposers in forecasting demand for Public Safety usage, and planning for the required capacity, the number of potential Public Safety users is also provided for each application below.

#### <<TO BE PROVIDED WITH FINAL RFP>>

- b. The Network shall support the logical segmentation of different "domains" of users (e.g. secure access by Public Service and/or Public Safety usage, secure and/or open access for public users, residential users, business users, etc.). This shall include the ability to define and manage different profiles (e.g. VLANs) for authentication, encryption and other service characteristics based on the requirements of each userdomain.
- c. The Network shall support the ability to prioritize traffic for Public Service and/or Public Safety usage in cases of emergency or as required by the City. Proposers shall

define the methods that will be used to prioritize municipal traffic in cases of natural disaster or other emergency.

## **B.4** Open Access

- a. The winning Proposer shall provide access to its wireless broadband Internet access transport services to multiple unaffiliated Service Providers.
- b. The Network shall support unilateral, inbound roaming relationships whereby subscribers to other fee-based national Wi-Fi roaming services may gain access to the Network.
- c. The Network shall support unilateral, outbound roaming relationships whereby subscribers to the Network may gain access to other fee-based national Wi-Fi roaming services.
- d. The winning Proposer, and any Service Provider affiliated with the winning Proposer, may also provide retail-branded services over the Network.

# **B.5** Services and Provisioning

- a. The Network shall provide a Fixed Broadband service. This service must support 802.11 b/g devices at a best-effort minimum 1 Mbps symmetric data transmission rate, a dynamic IP address and other Core ISP Services.
- b. The Network shall provide a Nomadic Broadband service. This service must support 802.11 b/g devices at a best-effort minimum 1 Mbps symmetric data transmission rate, a dynamic IP address and other Core ISP Services.
- c. The Network shall provide a Portable Broadband service. This service must support 802.11 b/g devices at a best-effort minimum 1 Mbps symmetric data transmission rate, a dynamic IP address and other Core ISP Services. Session-level connectivity must be maintained for in-motion subscribers at a minimum speed of 30 MPH.
- d. The Network shall provide free public access in City-designated areas surrounding convention centers, libraries, parks and other public spaces, not to exceed 5% of the geographic coverage area of the Network. Additional detail on City-designated spaces will be provided in the FINAL RFP.
- e. The Network shall provide a Fixed Broadband service at a discounted rate for low-income subscribers or a free service throughout the City, which may include a reduced data transmission rate.
- f. The Network shall provide a Fixed Broadband business-class service at a guaranteed minimum 3 Mbps symmetric data transmission rate.
- g. The winning Proposer shall allow Service Providers to provision services on a monthly, weekly and daily basis.

- h. Payment methods for all residential services must include credit and debit card. Other methods must be proposed for users who do not have the ability to pay with credit or debit cards (e.g. pre-paid vouchers, top-off cards).
- Proposers shall include in their proposal the expected costs of any required CPE for each Coverage Requirement and Service defined above. Proposers shall also state who will be responsible for CPE costs during the provisioning process.

# **B.6** Service Pricing

- a. Proposers shall propose specific wholesale rates in their proposals for each service defined in the Services and Provisioning Requirements above. All rates, terms and conditions for Service Providers not affiliated with the winning Proposer shall be as favorable as those provided to the winning Proposer and/or Service Providers affiliated with the winning Proposer.
- b. Proposers shall estimate the retail rates for any services to be marketed to the public by the winning Proposer.

#### B.7 Network Infrastructure

- a. The Network shall include a wireless Access Tier that supports connectivity from 802.11b/g devices through the City.
- b. The Network shall include a fixed wireless point-to-multipoint solution as a Backhaul Tier for aggregating Wi-Fi traffic from the Access Tier.
- c. The Network shall include a fixed wireless point-to-point solution, using licensed or leased spectrum, as a Distribution Tier for aggregating traffic from the Backhaul Tier back to an Internet POP.
- d. All Network traffic shall be aggregated back to a high-speed Internet backbone service at a POP, which shall support layer-three network transit for registered Service Providers. Provisions shall be made for redundancy of the POP facility.
- e. The Network shall support fault tolerance mechanisms to mitigate and/or eliminate single points of failure and ensure high reliability. The Network shall support reliability levels of 99.9% for the Access Tier and 99.999% for the Backhaul Tier, Distribution Tier and POP. Proposers shall identify the MTBF for any proposed network equipment and explain the processes that will be used to guarantee these service levels.
- f. The Network shall be easily scaled and upgraded in a modular fashion to support additional subscribers, new applications and new requirements, in order to meet evolving user demands. Proposers shall estimate the percentage of the initial Network capital cost that will be invested in upgrades during the contract term and elaborate on what steps they will take to determine when upgrades are required and how they will be rolled out. Proposers shall describe how the City can evaluate the winning Proposer's performance relevant to this sub-section.

- g. All outdoor equipment shall comply with IP56/NEMA4 dust and water ingress ratings, must withstand ambient temperature ranges of –40 C to +50 C and must adhere to all other applicable local ordinances.
- h. Proposers shall define any initial and/or future ability for their solution to provide, integrate with, coexist with or complement 4.9 GHz wireless public safety technology that may be of value to the City's public safety agencies. The Network shall not prohibit or negatively impact any initiative by the City during the contract term related to the deployment of wireless or other public safety technology.
- i. The Network shall support backup power for all network equipment sufficient to ensure continuous operation during a loss of electrical power. Proposers shall state the amount of time their solution will operate without electrical power and elaborate on any initial or future commitments they will make to increase backup power support.

#### **B.8** Customer Service

- a. Tier 1 Support for all services shall be provided by all registered Service Providers (including the winning Proposer if they are also providing retail services). Tier 1 Support shall provide subscribers with phone, web, e-mail and instant messaging support options for at least the following issues:
  - Sales inquiries
  - Order status
  - Service cancellation
  - Service setup
  - Connectivity problems
  - Service interruption/degradation
  - Credits and refunds processing
  - Account and billing inquiries
  - Disconnect and relocation requests
- b. Tier 2 Support shall be provided by the winning Proposer for all registered Service Providers. Tier 2 Support must provide Service Providers with phone and email support options for at least the following issues:
  - Escalation of issue not resolved by Service Provider's Tier 1 representatives
  - Proactive network status information
  - Three-party calling with Tier 2 Support agents, Tier 1 Support agents and subscribers
  - Settlement and billing inquiries between Service Provider and the winning Proposer
- c. Tier 3 Support shall be provided by the winning Proposer for all registered Service Providers. This shall include at least the following:
  - 7x24x365 management of personnel at the NOC
  - 7x24x365 pager and phone support for registered Service Providers

- Call escalation of critical issues not resolved by Tier 2 Support representatives
- Proactive publishing of network status information, alerts, etc. by the winning Proposer

# **B.9** Security

The Network shall support multi-layered security protocols and methods, to include at a minimum the following:

- a. Physical security for all critical network equipment components via secured facilities.
- b. Mechanisms to prevent or mitigate the risk of hackers, spammers, denial of service and other forms of malicious attacks on or through the network. These mechanisms should balance the need to prevent these attacks, while at the same time not punishing or burdening unnecessarily all users of the Network.
- c. No client software that is specific to the winning Proposer or Service Provider(s) shall be required on PCs, laptops or other mobile devices in order to use the network.
- d. Support for Media Access Control ("MAC") address filtering.
- e. Support for Wired Equivalent Privacy ("WEP") encryption, including both 64 and 128 bit keys.
- f. Support for Temporal Key Integrity Protocol ("TKIP") encryption.
- g. Support for Advanced Encryption Standard ("AES") encryption.
- h. Support for Wi-Fi Protected Access ("WPA").
- i. Support for 802.1x authentication using Extensible Authentication Protocol ("EAP") and Remote Authentication Dial-In User Service ("RADIUS").
- j. Support for the suppression of Extended Service Set Identifier ("ESSID") broadcasts.
- k. Support for multiple ESSIDs and the ability to map ESSIDs individually to Virtual LANs ("VLANs").
- I. Support for filtering of traffic based on Internet Protocol ("IP") addresses, subnets and Transmission Control Protocol ("TCP") ports.
- m. Support for VPN tunneling using Internet Protocol Security ("IPSec"). This VPN support must support true end-to-end encryption, regardless of at what point in the Network users elect to terminate their session.
- n. Support for encryption of all control and network management traffic.

# **B.10** Privacy

The City requires that consumer privacy be protected for all users of the Network.

a. A full disclosure of the privacy policy for all Proposers is required. This privacy policy shall adhere to all applicable federal and state laws, shall be communicated to all users on the Network and shall require users' explicit acceptance before any service is provisioned.

Proposers' privacy policy should, at a minimum, address the following:

- b. What information is collected, how it will be used, how long it will be stored, who it will be shared with (under what conditions) and whether it is correlated to a specific user, device or location.
- c. Mechanisms be provided to allow users to opt-in or opt-out of any service that tracks information about the user's physical location.
- d. Mechanisms be provided to allow users to opt-in or opt-out of any service that collects, stores, profiles, shares or markets information whether correlated to a specific user, device or location or on an aggregate basis on the searches performed, websites visited, emails sent or any other use of the network or transmission of data by users.
- e. Users not be "enumerated" or assigned any unique number that can be used to track individuals from session to session without their express consent.
- f. Data about users not be commercialized in any way without their express consent.
- g. Policies be in place to respond to legal demands for users' personal information in accordance with applicable laws.
- h. Personal information about users be kept only as long as it is operationally necessary.
- i. No blocking of applications, ports or other communication be used, except in situations where this blocking is solely to prevent Network abuse or is required by law.
- Users be allowed reasonable access to any information collected about them, including a reasonable opportunity to review information and to correct inaccuracies or delete information.

## **B.11 Community Technology Programs**

A desired outcome of the Digital Houston initiative is to expand the use of broadband and other technologies to strengthen education, healthcare, employment, public safety and other services, which will be life-enhancing for Houston's underserved populations.

The City has a well-established core of Community Technology Organizations, which will play a key role in the success of this initiative. These organizations currently contribute to the City by operating or supporting the work of Community Technology Centers (CTCs) and/or using technology to support social initiatives. These two focal areas are described in the sections below:

## **Basic and Enhanced Community Technology Center Services**

In Houston, more than 250 CTCs and technology assistance providers have been established as a result of programs and policies initiated by the federal government, State of Texas, Harris County, the City, community and faith-based organizations and directed philanthropy. See Appendix G (TO BE PROVIDED WITH FINAL RFP) for an overview of city neighborhoods and a summary of community technology center locations and organizations currently working in this arena.

It is critical for Proposers to understand the importance of the existing infrastructure and its connection to local constituents and CTCs. These community-based organizations are the gate keepers of local information and are, therefore, the appropriate actors for collaborating in the development of local content that is relevant, useful and available online.

## Basic Community Technology Center Services – Local Content and Culture of Use

Local content – relevant and meaningful community and neighborhood-based information on topics such as employment, housing, community events, education, childcare, social services and the arts – must be able to be understood by limited-literacy users, published in appropriate languages and offered in culturally appropriate ways.

As policies and programs are further implemented to encourage digital inclusion, design and deployment teams must focus their efforts on using emerging technologies as a tool to strengthen and support our existing community technology infrastructure. Strategies that promote a culture-of-use and digital skills in community based organizations operating CTCs, and the constituencies they work with, are critical. Some activities that will promote a culture-of-use include:

- Developing stronger and deeper links between technologists and community builders so that awareness of technology's impact is better understood;
- Creating an inventory of community based applications (i.e. SimHouston and other tools), along with technology descriptions, that illustrate how technology tools can be utilized as tools for personal improvement and social change; and
- Expanding online and offline opportunities for community based organizations to build capacity as well as share knowledge and experience around meaningful content, training materials and applications.

Through the work of various community organizations within the City, AmeriCorps\*VISTA members are being recruited and assigned to further enhance the effectiveness of several selected CTCs serving Houston Hope and other low-income neighborhoods.

Proposers have the opportunity to work with selected community technology organizations to encourage digital inclusion by coordinating and enhancing community technology initiatives to create common platforms, programs and goals so as to ensure the enhanced usefulness and effectiveness of CTC programs and activities. These Enhanced CTC Support Services (ECTCSS) can help to promote communication and cross-learning across selected CTCs, provide bandwidth and strategic seed funding, introduce computer and technology skills to low-income and under-resourced populations, and provide accessible and central support, capacity building activities, technical assistance and other services.

The strategic use of broadband technology could streamline service delivery, help selected CTCs effectively serve a larger number of constituents, facilitate community-based online projects, and facilitate collaboration across multiple community-based organizations in multiple low-income and under-served neighborhoods.

The City envisions that ECTCSS will focus on building economic, social, and cultural bridges between the diverse City neighborhoods and direct positive change within our City while leveraging Proposers' relationships and the rich diversity of Houston's community-based organizations operating CTCs. Community technology leaders in the City envision that the Network could provide significant new functionality and resources to address digital inclusion issues with enhanced community technology center support services.

Proposers are requested to describe in detail:

- How your proposed solution will collaborate with and support CTCs and community technology issues in the City;
- What experience your firm has in coordinating this type of service delivery and connections with community-based organizations;
- What ideas your firm has relative to providing enhanced CTC services to selected CTCs;
- How your proposed solution enhances selected community technology initiatives to create common platforms, programs and goals that ensure the usefulness and effectiveness of CTC programs and activities.
- How your proposed solution can:
  - Decentralize access to information and databases tools
  - Promote communication and cross-learning across selected CTCs
  - Provide bandwidth and strategic seed funding
  - Introduce computer and technology skills to underserved and underemployed residents,
  - o Implement improved connectivity solutions for community organizations
  - Provide accessible and central support, capacity building activities, technical assistance and other services

# **Enhanced Quality of Life**

The expansion of broadband and other relevant technologies into underserved communities develops the ability of these communities to adequately address their local issues and concerns. Many communities desire to increase their capacity to improve quality of life in their communities through education, healthcare, jobs, public safety and other services in their communities.

Proposers have the opportunity to recommend programs that utilize broadband or other technology to address the above issues. Innovative uses of technology to address the above issues are encouraged. The City is particularly interested in any best practices, which can be applied in the City in partnership with Community technology leaders.

Proposers are requested to describe in detail:

- Your firm's capabilities
- Your firm's experience regarding the coordination of this type of service delivery and connections with community-based organizations
- Proposed methods to enhance or coordinate with existing community technology initiatives to strengthen the delivery of these life enhancing programs
- Proposed methods to utilize broadband technology as a catalyst to improve education, health, jobs, public safety or other critical services in underserved communities

# **EXHIBIT C – REQUIREMENTS COMPLIANCE TEMPLATE**

To be provided with FINAL RFP.

# **EXHIBIT D - ECONOMIC/FINANCIAL DESCRIPTION TEMPLATE**

To be provided with FINAL RFP.

# **EXHIBIT E - M/WDBE MATERIALS**

To be provided with FINAL RFP.

# **EXHIBIT F – AFFIDAVIT OF OWNERSHIP OR CONTROL**

To be provided with FINAL RFP.

# **EXHIBIT G - COMMUNITY TECHNOLOGY PROGRAM DETAIL**

To be provided with FINAL RFP.

# **EXHIBIT H – CITY OF HOUSTON FAIR CAMPAIGN ORDINANCE**

To be provided with FINAL RFP.